

## Lecture Module - Electrical Instruments

ME3023 - Measurements in Mechanical Systems

Mechanical Engineering  
Tennessee Technological University

### Topic 1 - Performing Analog Measurements

# Topic 1 - Performing Analog Measurements

- Safety and Electricity
- Using a Digital Multimeter
- Measuring Voltage and Current
- Measuring Resistance and Continuity



Sanwa YX360TRF

# Safety and Electricity

Complete the safety training modules to learn more.

# Using a Digital Multimeter

## Benchtop Multimeter

- DMM
- Interface varies by manufacturer
- Features vary by model



Image: Fluke Multimeter



Image: Bk Precision Multimeter

# Using a Digital Multimeter

## Handheld Multimeter



Image:



Image:



Image:

# Measuring Voltage and Current

## Voltage



Image: Bk Precision Multimeter

[Read about measuring DC voltage  
or AC voltage](#)

# Measuring Voltage and Current

## Current



Image: Bk Precision Multimeter [Read about](#)

**measuring current (with clamp)**

# Measuring Resistance and Continuity

## Resistance



Image: Bk Precision Multimeter

[Read about measuring resistance.](#)

# Measuring Resistance and Continuity

## Continuity



Image: Bk Precision Multimeter

[Read about measuring continuity](#)